

Remarks/Arguments

A. Claims in the Case

Claims 1-7, 9-11, 13-19, 21-30, 32-34, 36-42, 44-57, 59-61, 63-69, 71-73, and 147-152 are pending. Claims 1, 24, 51-57, 59-61, 63-69, and 71-73 have been amended.

B. Claim Objections

The Examiner objected to claims 1, 24, 51, and 68 based on informalities. Applicant has amended claims 1, 24, 51, and 68 to conform to the Examiner's suggestions. Applicant respectfully requests removal of the objections of the claims.

C. 35 U.S.C. § 112, First Paragraph

The Examiner rejected claims 1-7, 9-11, 13-19, 21-30, 32-34, 36-43, 44-57, 59-61, 63-73 and 147-152 under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. Applicant has amended claim 1 for clarification. Further, Applicant notes support in Applicant's specification for the features of claim 1 as follows:

Amended claim 1 describes:

creating a plurality of lower level processing relationship objects in the processing relationship structure, wherein the plurality of lower level processing relationship objects in the processing relationship structure are descendants of the highest level processing relationship object,

Support for the above feature of amended claim 1 may be found at least on page 35, line 21 to page 36, line 19, which states:

In step 416, the user may select the first node created in step 414 on the processing relationship configuration screen in preparation for adding nodes at the second level as descendants of the first node.... In step 418, after the first processing node is selected, the user may insert a node at the second level as a descendent of the first node.... In step 422, the user may determine if nodes are to be added as descendants of any node already created in the processing relationship structure. If more nodes are to be added, the user proceeds to step 416 to select a node for which descendent nodes are to be added. Steps 416-422 may be repeated by the user until all processing relationship nodes in the processing relationship structure have been created and configured.

Additional support may be found at least in FIGS. 2, 3, 4, and 6, and in original claims 9 and 10, which state: "wherein the processing relationship structure is expanded by inserting one or more processing relationship objects as descendants of the highest level processing relationship object" and "wherein the processing relationship structure is edited by inserting or deleting one or more processing relationship objects, wherein each of the one or more processing relationship objects are descendants of the highest level processing relationship object".

Amended claim 1 also describes:

wherein one or more of the lower level processing relationship objects represents an FSO physical entity that has a physical presence or manifestation, wherein the FSO physical entity is a bank branch office or a bank regional office

Support for the above feature of amended claim 1 may be found at least on page 21, lines 27 to page 22, line 1, which states:

In the processing relationship structure, some nodes may represent physical entities in the FSO, and others may represent functional areas. A physical entity is an organizational unit that has a physical presence or manifestation, such as a bank branch office, regional office, or credit card line.

Additional support may be found at least in FIGS. 2 and 6, which show, for example, a branch office and a regional office in lower levels of a hierarchy.

Amended claim 1 also describes:

wherein one or more of the other lower level processing relationship objects represents a functional area, wherein the functional area is a credit card issuer or an acquirer of credit card payments;

Support for the above feature of amended claim 1 may be found at least on page 21, lines 27 to page 22, line 8, which states:

In the processing relationship structure, some nodes may represent physical entities in the FSO, and others may represent functional areas. A physical entity is an organizational unit that has a physical presence or manifestation, such as a bank branch office, regional office, or credit card line. A node representing a functional area is used to organize one or more other nodes into a sub-processing relationship group in the FSO processing relationship based upon some function of the FSO. Examples of functional areas include issuer, acquirer, and non-risk. The issuer function may be described as the function of issuing credit cards or other credit instruments to customers of the FSO. The acquirer function may be described as the function of acquiring payments from users of credit cards and other credit instruments on behalf of the FSO and client organizations of the FSO

Additional support may be found at least in FIGS. 2 and 6, which show, for example, an issuer and acquirer at a lower level of a hierarchy.

Amended claim 1 also describes:

...storing each processing relationship definition in the database

Support for the above feature of amended claim 1 may be found at least on page 14, lines 24-25 and original claim 1.

Amended claim 1 further describes:

processing a credit card transaction using at least one processing relationship definition of the prepared processing relationship definitions,

Support for the above feature of amended claim 1 may be found at least on page 20, lines 18-23, which states:

The processing relationship structure may be used by FSO application software programs to process FSO transactions. Examples of application software which may utilize the processing relationship structure, may include, but are not limited to, a report generation program, a credit card transaction processing program, a billing program, a monthly account reconciliation summary program.

Amended claim 1 further describes:

wherein the at least one processing relationship definition includes at least one lower level relationship object representing the FSO physical entity.

Support for the above feature of amended claim 1 may be found at least on page 21, lines 27 to page 22, line 1, and FIGS. 2 and 6.

"The test of enablement is whether one reasonably skilled in the art could make or use the invention from the disclosures in the patent coupled with information known in the art without undue experimentation." *United States v. Telecommunications, Inc.*, 857 F.2d 778, 785, 8 USPQ2d 1217, 1223 (Fed. Cir. 1988). A patent need not teach, and preferably omits, what is well known in the art. *In re Buchner*, 929 F.2d 660, 661, 18 USPQ2d 1331, 1332 (Fed. Cir. 1991); *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1384, 231 USPQ 81, 94 (Fed. Cir. 1986), cert. denied, 480 U.S. 947 (1987); and *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1463, 221 USPQ 481, 489 (Fed. Cir. 1984). In view of at least the above-referenced portions of Applicant's specification, Applicant respectfully submits that one reasonably skilled in the art could practice the invention of claim 1. Applicant respectfully submits that claim 1 and the claims dependent thereon meet the enablement requirement of 35 U.S.C. § 112, first paragraph. For similar reasons, Applicant submits that claims 24 and 51 and the claims dependent thereon meet the enablement requirement of 35 U.S.C. § 112, first

paragraph. Applicant respectfully requests removal of the rejections of the claims under 35 U.S.C. § 112, first paragraph.

D. The Claims Are Not Obvious Over Kurz in view of Jung and Further in View of Brobst Under 35 U.S.C. §103(a)

The Examiner rejected claims 1-7, 9-11, 13-19, 21-30, 32-34, 36-42, 44-57, 59-61, 63-69, 71-73 and 147-152 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,386,571 to Kurz ("Kurz") in view of U.S. Patent Publication No. 2003/0014421 by Jung ("Jung") and further in view of U.S. Patent No. 6,687,708 to Brobst et al ("Brobst"). Applicant respectfully disagrees with these rejections for at least the following reasons.

To reject a claim as obvious, the Examiner has the burden of establishing a *prima facie* case of obviousness. *In re Warner*, 154 U.S.P.Q. 173, 177-78 (C.C.P.A. 1967). To establish *prima facie* obviousness of a claimed invention, all claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974).

Claims 1, 24, and 51

Applicant's claims are directed to a method that includes creating a model of a financial service organization (FSO) including a plurality of processing relationship software objects. Creating the model of the FSO includes preparing a processing relationship definition for at least two of selected processing relationship object representations. A highest processing relationship object represents the FSO. One or more lower level processing relationship object representations represent an FSO physical entity that is a bank branch office or a bank regional office. One or more other lower level processing relationship object representations a credit card issuer or an acquirer of credit card payments. The processing relationship definition is stored. A credit card transaction associated with an FSO physical entity is processed using a processing relationship definition of the prepared processing relationship definition that includes a lower

level relationship object representing the FSO physical entity.

Amended claims 1, 24, and 51 recite in part:

creating a highest level processing relationship object in a processing relationship structure, wherein the highest level processing relationship object represents an FSO; and

creating a plurality of lower level processing relationship objects in the processing relationship structure, wherein the plurality of lower level processing relationship objects in the processing relationship structure are descendants of the highest level processing relationship object, wherein one or more of the lower level processing relationship objects represents an FSO physical entity that has a physical presence or manifestation, wherein the FSO physical entity is a bank branch office or a bank regional office, wherein one or more of the other lower level processing relationship objects represents a functional area, wherein the functional area is a credit card issuer or an acquirer of credit card payments;

...

...processing a credit card transaction using at least one processing relationship definition of the prepared processing relationship definitions, wherein the at least one processing relationship definition includes at least one lower level relationship object representing the FSO physical entity.

The combination of Kurz and Jung does not appear to teach or suggest at least the above-quoted features of claims 1, 24, and 51, in combination with the other features of the claims.

In the rejection of claim 1, the Examiner states in part:

The other types of entities (relationship objects) besides the business unit (business relationship objects) are optionally recited and thus carry no patentable weight.
(Office Action, page 5) (emphasis added)

Neither the term "business unit" nor the term "business relationship object" are recited at all in claim 1, let alone optionally recited with other entities. The Examiner's statement regarding "the business unit (business relationship objects)" appears to be a carry over from an earlier rejection of claim 1 at a time when claim 1 did recite the term "business unit". In particular, in an Amendment submitted July 24, 2006, claim 1 recited "wherein at least one of the plurality of lower level processing relationship objects represents a company of the FSO, a business unit of the FSO, a bank branch office, a regional bank, a credit card issuer, or an acquirer" (emphasis added). In the Examiner's rejection of that claim, the Examiner stated (in language very similar to the current rejection):

The other types of entities besides the business unit are optionally recited and thus carry no patentable weight.

(Office Action mailed October 24, 2006, page 7) (emphasis added)

In an amendment submitted March 26, 2007, however, Applicant deleted the optionally recited "business unit" from claim 1. Since claim 1 no longer even recites an optionally recited "business unit", Applicant submits that it is no longer appropriate to reject claim 1 based on an optionally recited "business unit".

Moreover, the cited passages from Kurz do not teach or suggest the combination of features of amended claim 1. For many of the features of claim 1, the Examiner appears to rely on col. 6, lines 13-64, column 11, lines 9-20, and Fig. 2C of Kurz.

The first cited portion of Kurz states:

1. The kernel entity set which in this case is "document" is the hierarchical top of the structure shown in FIG. 2C and is therefore positioned on top of the diagram, in this case in the upper left corner.
2. The role entity sets are placed below this higher order kernel entity set "document" and are offset to the right by a predefined distance. In the case of the role entity sets "contract" and "description" the role entity sets are

offset with respect to the kernel entity set whereas role entity sets which are subsets of other role entity sets are offset with respect to the role entity sets of which they are a subset. This is the case for the role entity sets "lease contract" and "sales contract" which are subsets of "contract". It is to be noted that the entity sets shown in FIG. 2C are arranged in an array of rows k and columns j. The kernel entity set "document" is placed in the upper left position k, j of this array. The role entity sets "contract" and "description" which are one hierarchical order below the kernel entity set "document" are placed in the next column j+1. The same applies analogously for the further role entity sets even one hierarchical order below the role entity sets "contract" and "description". These are placed in the column j+2.

(Kurz, column 6, lines 27-53)

The second cited portion of Kurz states:

It is to be noted that the entity relationship diagram of the invention may be transformed to an optimized database--such as a relational database. This transformation may be carried out by known methods. The resulting database may serve as a repository which is adapted to store instances of the entity sets of the diagram. Since the entity relationship diagram is redundancy free, the same applies as a consequence to the resulting data base. This also results in optimal access paths and a minimized access time to the instances stored in that database.

(Kurz, column 11, lines 9-21)

Kurz thus discloses a kernel entity set having "document" at the hierarchical top of the structure. The role entity sets "contract" and "description" are placed below the higher order entity set "document". (Kurz, column 6, lines 14-65; FIG. 2C). Kurz also discloses that an entity relationship diagram can be transformed into an optimized database such as a relational database. (Kurz, column 11, lines 9-21). The Examiner acknowledges that Kurz does not expressly disclose a Financial Service Organization (FSO). The Examiner appears to rely on Jung to remedy the deficiencies in Kurz. The Examiner states:

col .6 lines 13-64 and col. 11, lines 9-20 and fig. 2C- shows a financial service organization involving sales where each of the boxes is a relationship with the dotted lines representing different levels. The other

types of entities (relationship objects) besides the business unit (business relationship objects) are optionally recited and thus carry no patentable weight. Kurz did not expressly disclose a FSO. Jung in fig.s's 34A and 34B shows relationship objects in a hierarchy in a business relationship (FSO).

(Office Action, page 3)

Figs. 34A and 34B of Jung discloses a hierarchical tree structure mapped to a hypergraph representation. The graph shows parent/child relationships between persons/offices within an organization (for example, between CEO and VP Sales). Jung does not appear to disclose an object representing a financial services organization (FSO). Further, Jung, alone or in combination with Kurz, does not appear to teach or suggest creating a highest level processing relationship object in a processing relationship structure, wherein the highest level processing relationship object represents an FSO; and creating a plurality of lower level processing relationship objects in the processing relationship structure, wherein the plurality of lower level processing relationship objects in the processing relationship structure are descendants of the highest level processing relationship object, wherein one or more of the lower level processing relationship objects represents an FSO physical entity that has a physical presence or manifestation, wherein the FSO physical entity is a bank branch office or a bank regional office, wherein one or more of the other lower level processing relationship objects represents a functional area, wherein the functional area is a credit card issuer or an acquirer of credit card payments. Moreover, Jung, alone or in combination with Kurz, does not appear to teach or suggest processing a credit card transaction using at least one processing relationship definition of the prepared processing relationship definitions, wherein the at least one processing relationship definition includes at least one lower level relationship object representing the FSO physical entity, as recited by amended claims 1, 24, and 51.

The Examiner provides a quotation of a portion of M.P.E.P. § 2106.01. The quotation provides that “descriptive material” is “non-statutory when claimed as descriptive material per

se" (emphasis added). In view of the steps performed in claim 1, including but not limited to, displaying at least two processing relationship object representations on a display screen, and "the FSO computer system processing a credit card transaction", performed, claim 1 is clearly not directed to "descriptive material per se". In any case, Applicant submits that the features of amended claims 1, 24, and 51 are not non-functional descriptive material. "Nonfunctional descriptive material", as stated in the M.P.E.P, "includes, but is not limited to music, literary works, and a compilation or mere arrangement of data." *See* M.P.E.P. § 2106.01. Amended claims 1, 24, and 51 recite processing a credit card transaction using at least one processing relationship definition of the prepared processing relationship definitions, wherein the at least one processing relationship definition includes at least one lower level relationship object representing a FSO physical entity. The "bank branch office" or a "bank regional office" are FSO physical entities that are functionally related to the steps of processing a credit card transaction. For at least this reason, these elements are not merely descriptive material, much less non-functional descriptive material.

For at least these reasons, Applicant submits that claims 1, 24, and 51 are allowable over the cited art.

Applicant submits that many of claims dependent on claims 1, 24, and 51 are independently patentable. For example, amended claim 4 recites: "wherein the processing relationship value is configured for use in identifying an FSO business entity as an owner of the FSO transaction-related data, wherein the FSO business entity is a bank branch office or a regional bank or a credit card line or an issuer or an acquirer".

The Examiner states:

As per claims 4, 27, 54, 147, and 150, Kurz discloses, wherein the processing relationship value is configured for use in identifying an FSO business entity as an owner of the FSO transaction-related data, wherein the FSO business entity is a

bank branch office or a regional bank or a credit card line or an issuer or an acquirer. In Fig. 4E of Kurz shows a business entity as a company and a business unit (see col. 7, line 53 - col. 8, line 27) (emphasis added)

Applicant believes that the Examiner is basing the rejection of the claim 4 on the language of Applicant's claims before Applicant's amendment of March 26, 2007. In particular, claim 4 previously recited "wherein the FSO business entity is a company or a business unit or a bank branch office or a regional bank or a credit card line or issuer or an acquirer." (See Amendment; Response to Office Action Mailed October 24, 2006) (emphasis added). After the amendment of March 26, 2007, however, claim 1 recites: "wherein the FSO business entity is a bank branch office or a regional bank or a credit card line or an issuer or an acquirer." (emphasis added). Kurz and Jung, singly or in combination, do not appear to teach or suggest wherein the processing relationship value is configured for use in identifying an FSO business entity as an owner of the financial service organization transaction-related data, wherein the FSO business entity is a bank branch office or a regional bank or a credit card line or an issuer or an acquirer.

Concerning claim 147 and 150, the Examiner states:

As per claims 4, 27, 54, 147, and 150, Kurz discloses, wherein the processing relationship value is configured for use in identifying an FSO business entity as an owner of the FSO transaction-related data, wherein the FSO business entity is a bank branch office or a regional bank or a credit card line or an issuer or an acquirer. In Fig. 4E of Kurz shows a business entity as a company and a business unit (see col. 7, line 53 - col. 8, line 27)

Applicant notes that claims 147 and 150 include different features than claim 4. For example, claim 147 recites: "wherein the plurality of lower level processing relationship objects comprises a credit card issuer object representing a credit card issuer and an acquirer object representing an acquirer, and wherein each of the credit card issuer object and the acquirer object has one or more descendent processing relationship objects." Claim 150 recites: "wherein at least one of the one or more descendent processing relationship objects represents a bank branch." Neither

Kurz nor the other cited art appears to teach or suggest these features in combination with the other features of claims.

Claim 11 recites: "wherein the displaying one or more processing relationship object representations on a display screen comprises displaying values associated with a sequence number for at least one of the plurality of lower level processing relationship objects and a level number for the at least one lower level processing relationship object, wherein the level number identifies a level in the processing relationship structure." The cited art does not appear to teach or suggest this feature in combination with the other features of claim 11.

The Examiner takes the position that Kurz, Fig. 5, discloses the above-quoted features of claim 11. Applicant respectfully disagrees. Regarding Fig. 5, Kurz states:

In FIG. 5 a more complex example of an entity relationship diagram according to the invention is shown. The entity relationship diagram is displayed on a display 9 of a computer system. It comprises the kernel entity sets K_0 , K_1 and K_2 , the relation entity sets R_{00} , R_{01} , R_{02} and R_{12} as well as the attributive entity sets A_{00} and A_{01} and the role entity sets P_{00} and P_{01} . The kernel entity sets are displayed along a horizontal line 7 which is indicated by the dashed line. The horizontal line 7 partitions the display into a first and a second section. The first section is the relation section where the relation entity sets are displayed and the second section is the kernel section where the kernel entity sets, and optionally the attributive entity sets and the role entity sets are displayed. For simplicity the attributive entity sets and role entity sets of the kernel entity sets K_1 and K_2 of FIG. 5 are not shown in the diagram. In this example the symbols representing the different entity sets are arranged in an array of allowable positions on the display 9. This array of allowable positions is indicated by the grid of lines shown in FIG. 5. The point 8 defines the origin of a coordinate system x, y of this array.

(Kurz, column 8, lines 4-27)

Fig. 5 of Kurz discloses an entity relationship diagram that makes reference to various kernel entity sets designated K_0 , K_1 and K_2 , relation entity sets designated R_{00} , R_{01} , R_{02} and R_{12} attributive entity sets designated A_{00} and A_{01} and the role entity sets designated P_{00} and P_{01} . Kurz

does not teach or suggest displaying one or more processing relationship object representations on a display screen comprises displaying values associated with a sequence number for at least one of the plurality of lower level processing relationship objects or a level number for the at least one lower level processing relationship object, wherein the level number identifies a level in the processing relationship structure.

Regarding claim 151, the Examiner states:

As per claims 11, 34, 61, 148, 151, Kurz discloses, wherein the displaying one or more processing relationship object representations on a display screen comprises displaying values associated with a sequence number and a level number. (Fig. 5 – shows displayed values in a sequence number for the lower level processing objects and the name identifies level number in the processing relationship structure).

Claim 151 recites: “wherein displaying the at least two processing relationship object representations comprises displaying a row for each of at least two processing relationship objects, wherein each of the rows comprises an object identifier and a level number, wherein the descendants of each object appear directly below that object.”

The Examiner takes the position that Kurz, Fig. 5, discloses the above-quoted features of claim 11. Applicant respectfully disagrees. As noted above with respect to claim 11, Fig. 5 of Kurz discloses an entity relationship diagram that makes reference to various kernel entity sets designated K₀, K₁ and K₂, relation entity sets designated R₀₀, R₀₁, R₀₂ and R₁₂ attributive entity sets designated A₀₀ and A₀₁ and the role entity sets designated P₀₀ and P₀. Kurz does not teach or suggest “wherein displaying the at least two processing relationship object representations comprises displaying a row for each of at least two processing relationship objects, wherein each of the rows comprises an object identifier and a level number, wherein the descendants of each object appear directly below that object.”

Regarding claim 151, the Examiner states:

The type of information displayed is given very little patentable weight because it is considered “non functional descriptive material that cannot render nonobvious an invention that would have otherwise been obvious.”...[citations omitted]. (when descriptive materials is not functionally related to the substrate, the descriptive material will not distinguish the invention from the prior art in terms of patentability.) Statements of intended use do not serve to distinguish structure over the prior art.

The Examiner appears to take the position that the features claim 151 are “non functional descriptive material.” Applicant respectfully disagrees. Claim 151 recites displaying a row for each of at least two processing relationship objects, wherein each of the rows comprises an object identifier and a level number, wherein the descendants of each object appear directly below that object. The display of the object identifier and a level number, and the display of the descendants of each object below the object, are not non-functional, but are expressly functional in that they provide specific functional information pertaining to the object (namely the object identifier and the level number) in a particular arrangement for assisting the user in processing the transactions. Moreover, none of the information recited in claim 151 is merely an “intended use.” For at least these reasons, Applicant submits that claim 151 is allowable over the cited art.

E. Additional Remarks

Based on the above, Applicant submits that the claims are now in condition for allowance. Favorable reconsideration is respectfully solicited.

Applicant requests a one-month extension of time to file this response. If any additional extension of time is required, Applicant hereby requests the appropriate extension of time. If any fees are omitted or if any fees are required or have been overpaid, please appropriately charge or credit those fees to Meyertons, Hood, Kivlin, Kowert & Goetzel, P.C. Deposit Account Number 50-1505/5053-30801/EBM.

Respectfully submitted,


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